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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,756	09/17/2001	Ulrich Stieler	02365	8945

987 7590 04/11/2003

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EXAMINER

KUHNS, ALLAN R

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 04/11/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/936,756Applicant(s)  
STIELERExaminer  
KUHN SGroup Art Unit  
1732

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE(3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- ☐ Responsive to communication(s) filed on \_\_\_\_\_
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-24 is/are pending in the application.  
Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-24 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some\* ☐ None of the:
  - ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) \_\_\_\_\_
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

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1. Claims 1-20 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is indefinite due to the use of “possibly” in conjunction with a third stage, and it is unclear what is meant by the use of “following” on line 3 of that claim. The indefiniteness caused by “possibly” could be remedied by the substitution of “optionally”. In addition, “the intermediate cycle times” in claims 3, 9, 17 and 23 and “the critical propellants” in claim 8 lack antecedent basis within the claims. Clarification is required.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 5-16, 19-20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olabisi (4,136,220). Olabisi discloses the basic claimed method including (1) in a first stage, feeding a propellant-free melt portion into a cavity, and (2) in a second stage, adding a physical propellant at elevated pressure to the melt portion, wherein metering (or coordinating the fluid flow rate and pressure) of the propellant in the second stage occurs in a pressure regulated manner and the pressure exerted on the propellant during injection is greater than the pressure exerted between or after addition (because the propellant flows toward an area of lower pressure), and the expansion of the propellant occurs in the cavity as it forces the melt against the walls of the mold cavity. That the propellant is under a lower pressure at some point before

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injection would have been obvious to one of ordinary skill in the art since such a time includes a time prior to pressurizing the propellant in the first place. Olabisi does not designate the product produced a foam, but Olabisi, in Figures 3A and 4A illustrate a formation or web having apparently an open structure having large cells open to the interior of the article.

Olabisi suggests maintaining pressure, as in claim 3, and the use of valves, as in claims 5-11 and injection equipment, as in claims 12-13 are well known and would have been obvious to one of ordinary skill in the art in order to facilitate and control the delivery of the melt portion and propellant to the cavity.

Olabisi discloses the use of a compressible fluid, as in claim 2, water, as in claim 14, a gas as in claim 15, and carbon dioxide, as in claim 16. Note column 2, lines 18-24. It is submitted that a counterpressure builds up in the practice of the process of Olabisi, as in claim 19, since the cavity is essentially a closed one. The aspects of claim 20 are essentially a statement of an intended use for the article molded instead of a manipulative step used to distinguish "method" claims over prior art. Olabisi suggests maintaining pressure, as in claim 23.

4. Claims 21-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (4,344,710). Johnson et al. disclose the basic claimed device for metered or controlled addition of physical propellants to a foamable melt including (1) a storage means, in which the propellant is stored under pressure, (2) a pressure control valve for regulating the propellant pressure, (3) an injection point configured as a throttle or orifice means, at which the

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propellant is fed to the melt, and (4) a flow controller at or near the injection point. Johnson et al. teach the use of control valve 118, and it would have been obvious to one of ordinary skill in the art to use that valve as a closure mechanism in order to stop the flow of propellant. Johnson et al. teach or suggest the use of a pressure relief mechanism by providing accumulator 108 to moderate or relieve pressure surges. Note Figure 2.

5. Claims 4 and 17-18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Kuhns whose telephone number is (703) 308-3462. The examiner can normally be reached on Monday to Thursday from 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino, can be reached on (703) 308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

*Allan R. Kuhns*  
ALLAN R. KUHN  
PRIMARY EXAMINER *Av 1732*  
*4-9-03*